

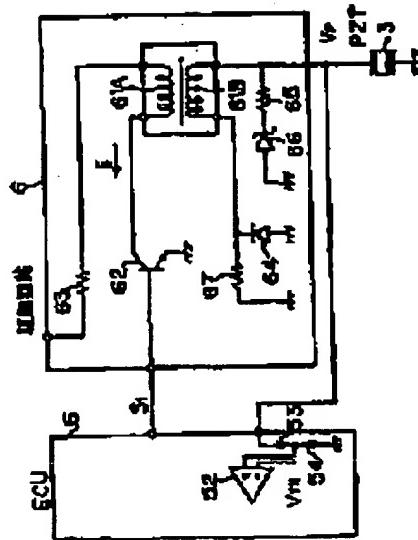
## DRIVE CIRCUIT FOR PIEZO-ACTUATOR

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### Abstract of JP4309273

**PURPOSE:** To simplify the structure and reduce the size of a piezo-actuator by charging and discharging the piezo-actuator by utilizing a resonance circuit composed of the inductance of a transformer and capacitance of the piezo- actuator.

**CONSTITUTION:** When an electric current is made to flow to the primary coil 61A of a transformer and the current is discontinued when the current reaches a prescribed value, a fly-back voltage generated in the transformer by the abrupt change in the current is applied across a piezo-actuator 3. The waveform of the voltage is generated by the resonance between the secondary inductance of the transformer and capacitance component of the actuator 3 and, when the half wave of the voltage is utilized, the waveform of a conventional piezo- actuator drive circuit 6 can be approximated by setting the inductance and capacitance to appropriate values. Therefore, the need of the conventionally used short circuit signal generation circuit, mutual timing means, and high- voltage resistive switching element can be eliminated and the circuit 6 can be simplified in structure and reduced in size.



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